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6/2/05
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CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ESTABLISHING THE SCOPE FOR THE
2005 L. G. HANSCOM FIELD ENVIRONMENTAL STATUS AND PLANNING REPORT

PROJECT NAME : 2005 Hanscom Field Environmental
Status and Planning Report
PROJECT MUNICIPALITY : Bedford, Concord, Lexington, and
Lincoln
PROJECT WATERSHED : Shawsheen River
EOEA NUMBER : 5484/8696
PROJECT PROPONENT : Massachusetts Port Authority
(Massport)
DATE NOTICED IN MONITOR : April 9, 2005

As Secretary of Environmental Affairs, I hereby establish the scope for analysis to be presented in the 2005 Hanscom Field Environmental Status and Planning Report (ESPR). In accordance with the provisions of 301 CMR 11.00 and 11.09 Special Review Procedures, this ESPR process was established by the proponent and this office to replace the 1995 Update to the Generic Environmental Impact Report (GEIR).

Project Description

Hanscom Field comprises approximately 1,300 acres of land, located approximately 20 miles northwest of Boston, within the municipalities of Bedford, Concord, Lincoln, and Lexington. Since 1974, when Massport assumed ownership of the field, it has primarily accommodated private GA activity, commercial, and cargo service. The Federal Aviation Administration (FAA) identifies Hanscom Field as a reliever airport. As a reliever to Logan Airport, Hanscom Field provides substantial airside relief by annually serving over 200,000 general aviation (GA) operations. Hanscom Field also supports limited commercial air service.

The ESPR inventories Hanscom's facilities and infrastructure, summarizes Massport's tenant audit program,

identifies airport activity levels, describes ground transportation, explains Massport's Environmental Management system, and provides information on Hanscom's planned role in the future regional transportation system and its 5-year projected improvement program. It also looks at noise and air quality levels under existing and alternative future scenarios, and identifies cultural, historic, conservation and recreational resources.

History and Purpose of ESPR

Since 1985, the GEIR (and now the ESPR) has provided a retrospective analysis of past trends in the environmental effects of Hanscom Field while including analyses for future conditions. As a result, these documents remain an effective planning tool from which the proponent's policy and program developments are derived. The 2005 ESPR should present an overview of the operational environment and planning status of Hanscom Field and should provide long-range projections of environmental conditions against which the effects of future individual projects can be compared. The ESPR allows the reviewer to see historical environmental information, current information, and the forecast of the future environmental effects at Hanscom Field.

The ESPR does not replace the MEPA review of specific projects at the site that exceed regulatory thresholds. I note that the thresholds specifically exempt routine maintenance and replacement projects. For each project-specific review, Massport would be required to perform an individual analysis of impacts and mitigation (to be implemented, for those projects that require a stand-alone EIR, through Section 61 Findings). The ESPR serves as a vehicle for ensuring that long-term, broad-scope planning informs the review and implementation of individual actions at Hanscom Field.

The Proposed Scope for the 2005 ESPR was submitted by Massport. While I have used that scope as a framework for this certificate, I have modified it based on the 2000 ESPR Scope, in response to the comments received, and internal EOEa review. Therefore, this scoping certificate is the governing document for the contents of the 2005 ESPR.

2005 ESPR Outline

The 2005 ESPR should follow the general format of the 2000 ESPR. Detailed technical studies should be summarized in a readable format to illustrate clearly the implications of recent trends, existing conditions and potential future scenarios. The 2005 ESPR should use the base information developed for the 2000 ESPR, present policy considerations and an overview of the airport's current and potential future role within the regional planning context, and include a status report on the proponent's proposed planning initiatives and projects. The 2005 ESPR technical studies should include an analysis of airport activity levels, noise, ground access, air quality, water quality, and sustainability.

The chapters on ground transportation management, noise, air quality, and water quality should include the following sections:

- Discussion of analysis methodologies and assumptions.
- Report of 2005 conditions in comparison to trends from previous years, at least since 1995 (historical trends are most valuable when traced back 10 or 15 years, where the data is available).
- Prediction of 2010 and 2020 conditions, based upon the growth scenarios described in Section IV below.

The analysis presented in the 2005 ESPR will prove valuable when determining how well current planning is responding to actual needs. The analysis should also provide important insights into how reliable future projections might prove to be. I have therefore kept the scope of the 2005 ESPR very similar to the scope for the 2000 ESPR. The 2005 ESPR should compare predicted with actual values for 2005. This comparison should lead to the refinement of the scope for subsequent ESPRs. I have added several requirements to the scope, such as ...

SCOPE

Executive Summary

The Executive Summary should provide a summary of the major sections of the ESPR, with supporting graphics and data tables. It should be made available as a separate document to facilitate wider distribution, including on Massport's web site.

I. Introduction

This section should generally introduce the ESPR and place it in its environmental and regulatory context. This section should:

- Summarize the evolution of the Hanscom Field environmental review process.
- Describe the analysis framework for the environmental reporting and technical studies to be conducted.
- Describe the organization of the 2005 Hanscom Field ESPR.

II. Facilities and Infrastructure

This section should update the information that was presented in the 2000 ESPR regarding the airfield and its supporting infrastructure and utility systems, including:

- The use and storage of hazardous materials at Hanscom Field, including jet fuel use and spill prevention efforts.
- The proponent should report on any deficiencies in the water and wastewater distribution systems to Hanscom facilities in Bedford.
- Identify changes in water and wastewater demand/generation at Hanscom facilities for 2000 to 2005, and projections for water use and wastewater flow for 2010 and 2020, as requested by the Department of Environmental Protection (DEP).
- Identify Massport's water conservation measures for equipment, plumbing, and landscape irrigation at Hanscom.
- Identify Infiltration/Inflow removal proposed for the wastewater system and report it in section XII.
- The status of the Authority's tenant audit program.
- The current status of the 21E sites at Hanscom Field.

This section should contain information on the size and use of all existing structures and parking areas (including numbers of spaces).

III. Airport Activity Levels

The ESPR should report on airport activity levels for 2000 to 2005 and describe the new forecasts of aviation activity for 2010 and 2020. This proposed scope is being developed concurrent with the ongoing New England Regional System Plan (NERASP).

Historic airport activity levels will be described. The ESPR should explain the process an airline must follow to commence service at Hanscom. It should provide an update of activity levels at Hanscom Field according to the following:

- Report on aircraft fleet mix and on activity levels of GA, commuter, and military operations from 2000 to 2005.
- Compare 2000-2005 activity levels to historic trends.
- Compare actual 2005 activity levels to forecasted 2005 activity levels from the 2000 ESPR.
- Report on current and future trends within the airline industry.

The ESPR should develop forecasts of aviation activity for 2010 and 2020 based on recent trends at Hanscom Field and with consideration of the role that the airport plays in the regional airport system. The ESPR should report actual changes in fleet mix and aircraft operations at Hanscom Field - both increases and decreases - and compare these data to the range of future activity levels and fleet mix defined by the moderate and high growth scenarios of the 2000 ESPR. Differences between actual and previously forecast activity levels should be explained and should be reflected in the underlying assumptions for the 2010 and 2020 forecasts. The forecasts should also include coordination with forecasting for the Logan ESPR and the development of forecasts for the New England Regional Aviation System Plan Update.

Each forecast year should use a moderate growth scenario and a higher growth scenario that will vary the fleet mix. The fleet mix of the moderate growth scenario should be comparable to existing conditions that include GA, military, commuter service and some cargo activity. This scenario should be based on recent trends at the airport as well as regional and national aviation trends. A second scenario should look at a higher growth rate in GA, commuter and cargo operations. The purpose of the second scenario is to address the uncertainty of the commuter and cargo markets and to provide a sensitivity analysis for the evaluation of potential environmental impacts. The ESPR should provide future aviation forecasts according to the following:

- Prepare 2010 activity levels and passenger forecasts.
- Prepare activity levels and passenger forecasts for the year 2020, which is consistent with the Logan ESPR and other regional planning efforts.

The ESPR should consider the effects of other federal military base closings on military activity levels at Hanscom Field.

IV. Airport Planning

The ESPR should assess Massport's planning strategies for operating an efficient airport in an environmentally sensitive manner. As owner and operator of Hanscom Field, the proponent also must accommodate and guide airport tenant development. The ESPR should describe the status of planning initiatives and projects for the:

- Terminal Area.
- Airside Area.
- Landside Area.

The ESPR shall identify and describe each project contained in Massport's five-year capital improvements program, and identify which, if any, of these projects may require individual MEPA review. The ESPR should describe any new FAA or Massport security policies that would affect environmental impacts relating to physical facilities or airfield operations.

This chapter should also report on planning and development initiatives by the Minute Man National Historical Park (MMNHP), the Hanscom Air Force Base, and the four contiguous towns that affect Hanscom Field and are affected by Hanscom Field.

V. Regional Transportation Context

The ESPR should describe the role of Hanscom Field in the region's transportation system, and should report on the proponent's efforts to strengthen the regional transportation system and on its cooperative efforts with other transportation agencies to promote an efficient regional aviation system with improved public/private transportation access. It should draw upon and update information provided in the most recent Logan ESPR Update in relation to Hanscom Field and should include the following:

- Hanscom Field's role in the GA airport network.
- The integration of the New England regional airport facilities as a regional system.
- Regional airport operations, passenger activity levels, and the status of plans and new improvements as provided by regional airport authorities and recent rail service initiatives by others that could affect air passenger travel.

- The role that Logan International Airport plays in intercity travel choices, and diversion opportunities to alternative modes and to regional New England airports will be estimated based on available data.
- Massport's efforts to promote service at Worcester and other airports, as well as other Massport involvement to promote the regional transportation system.
- The current status of the ground access improvements at the four New England regional airports (Logan International Airport, T. F. Green Airport, Manchester Airport, and Worcester Regional Airport) by state transportation agencies, including projected dates for completion of studies and/or construction and an analysis to quantify the effects of these measures upon projected passenger levels at each of the airports.
- Relevant regional and local highway studies and transit projects such as the Urban Ring.

VI. Ground Transportation

The ESPR should report on Ground Transportation conditions using the following indicators:

- Traffic, roadway and access analysis results.
- Mode share data.
- High occupancy vehicle (HOV) ridership alternatives.
- Parking inventory, and demand and management information.

The traffic analysis will be done in accordance with the EOEa/EOTC Guidelines for MEPA review. Background growth in traffic within the Study Area attributed to Hanscom Field as compared to other area sources will be evaluated. The Study Area for the traffic analysis in the 2000 ESPR should be maintained. The ESPR should include the fourteen intersections that were counted for the 2000 ESPR within this Study Area. The ESPR should identify and evaluate those Study Area intersections at which Hanscom Field traffic contributes 10-percent or more to the existing traffic volumes on any intersection approach. The ESPR should also use this approach to evaluate the Study Area intersections for the forecast activity levels and years.

The ESPR should show how Massport is developing partnerships with the U.S. Air Force and other abutters and area businesses to facilitate an effective set of regional Transportation Demand Management (TDM) measures. Other special topics should address

recent studies, and issues raised in the 2000 ESPR Certificates, reviewers' comments, and should:

- Report available information from Massport's survey of Hanscom Field employees.
- Describe the full range of TDM strategies, including potential for participation in a TMA.
- Review, summarize and analyze, as necessary, existing metropolitan transportation documents and report as to how they relate to Hanscom Field access.

The 2005 ESPR should provide a more detailed discussion of the impacts of constructing a new roadway through the Air Force Base to reach the East Ramp Area.

VII. Noise

The ESPR shall report current conditions for the year 2005 and projections for the forecast activity levels and years, using the following indicators:

- EXP as calculated in accordance with FAA prescribed standards and past practice at Hanscom Field
- Day-Night Average Sound Level (DNL) contours for 55, 60, 65, and 70 dBA.
- Time-Above (TA) contours showing 60, 90, and 120 minutes of exposure to 55 dBA (the ESPR shall also specifically address whether modeling of the 30 or 45 minute TA contour is sufficiently reliable).
- Single Event Level Distribution (SEL/D) metrics, as already incorporated into the annual Noise Report.
- A ranked tabulation of take-off noise levels for different classes of aircraft (used as the basis for SEL/D), and the numbers of operations for each class (on an average daily or monthly basis).

All noise contour levels should be computed with the Integrated Noise Model (INM): the DNL levels depicted should be based on accepted EPA and FAA guidelines. The basic structure for the TA analysis should follow the protocols developed for the Logan ESPR. The ESPR shall identify any past or current changes in the INM model, quantify the effect of modeling changes upon data, and ensure that reporting of past trends is adjusted for such changes. The ESPR shall quantify the land area and residential population within DNL and TA contours, based on year

2000 census data. The ESPR should contain an analysis and review for areas that are affected by noise from aircraft upon start-up and take-off roll. The ESPR should address the issue of engine run-ups and the operation of Auxiliary Power Units (APU) and Ground Power Units (GPU). It should consider ground monitoring of noise "hot spots" where complaints are common.

The ESPR should present the noise data from the permanent monitoring stations at Hanscom Field, including minimum, maximum and average daily DNL values. The ESPR should address the reliability of certain monitoring locations, particularly with respect to background noise levels, and it should compare predicted with actual noise measurements. Special topics should address recent studies, and issues raised in the previous 2000 ESPR Certificates.

In the mitigation Section, the ESPR should describe the Workgroup noise abatement measures that have been implemented, and discuss their effectiveness. The 2005 ESPR should include an acoustical treatment to reduce noise impacts in engine run-up areas. In the 2000 FESPR Certificate, I recommended noise mitigation be proposed and implemented for the Wheeler-Merriam House in Concord because it is located within the 55dBA DNL contour. The proponent should propose noise mitigation measures at other noise sensitive sites that fall within the established noise contours as they change over time.

VIII. Air Quality

The ESPR should report on current conditions for the year 2005 and projections for the forecast activity levels and years using the following indicators:

O Emissions Inventory for:

- Carbon Monoxide (CO)
- Oxides of Nitrogen (NO_x)
- Volatile Organic Compounds (VOCs)
- Particulate matter (PM₁₀)

O Available monitoring results for:

- Ozone Precursors
- Nitrogen Dioxide (NO₂)

The ESPR should report on measures to reduce on-site emissions from all sources, including fuel handling, ground service equipment, and building heating and cooling (see also

Section XII). As discussed in DEP's comment letter, the ESPR should also add PM_{2.5} and carbon dioxide (CO₂) to future emissions inventories. The ESPR should report on Massport's efforts to encourage fixed base operators to consider purchasing alternatively fueled vehicles.

IX. Wetlands/Wildlife/Water Resources

The ESPR should include the most recent wetlands delineation, the identified vernal pools, and the perennial status of Elm Brook. It should report wildlife habitat mapping using available information from Massachusetts Natural Heritage and Endangered Species Program (NHESP). The ESPR should include an update of Massport's vegetation management program.

The ESPR should report on any incremental changes to the Hanscom Field storm water management system and to the Storm Water Pollution Prevention Plan (SWPPP). It should identify the Best Management Practices that Massport will undertake as part of the SWPPP. It should describe the water quality monitoring program at the Shawsheen River, other surface water, and groundwater. The ESPR should provide information on the National Pollutant Discharge Elimination System (NPDES) permit, and the SWPPP. Reporting indicators for water quality improvement should include NPDES Permit monitoring results and the results from its limited monitoring program when it uses runway-deicing chemicals.

The ESPR should identify changes to the amount of impervious areas at Hanscom Field for 2000 to 2005, and that future changes to the amount of impervious area be estimated for the 2010 and 2020 growth scenarios.

X. Cultural and Historical Resources

The ESPR should review the existing data on historic and archeological resources at Hanscom Field. The most current version of the State Register of Historic Places and the files of the Massachusetts Historical Commission (MHC) should be reviewed. The proponent should prepare a cultural resources survey that meets the Secretary of Interior's Standards and Guidelines for Identification as requested by MHC for the Hanscom study area. The ESPR should describe Massport's efforts to address concerns raised by the Minute Man National Historical Park (MMNHP). Massport should also consult with the towns to obtain the latest historical/archaeological information. The ESPR should report on the interagency working group that was formed to review impacts

on the MMNHP. It should identify and describe the National Park Service's soundscape goals and plans for the MMNHP.

As discussed in Section VII above, TDM measures to reduce demand must take precedence over capacity enhancement. I would view any proposed work in the National Park as effectively subject to the standards of EOEAs Article 97 Policy, which requires findings of no feasible alternatives and no net loss of parkland. Massport should use the 55dBA DNL standard for buildings listed on the State Register when it is determining mitigation measures. The ESPR should outline the costs for such mitigation measures, or explain in detail the rationale for not implementing such mitigation measures if it determines that such mitigation is infeasible.

The ESPR should identify how it will work with the four communities and the Department of Food and Agriculture to protect Massport-owned agricultural land from conversion to non-agricultural uses.

XI. Sustainable Development and Environmental Management System (EMS)

The ESPR should report on the development of Massport's Sustainable Development Program and the EMS Program. Massport recently received an ISO 14001 Certification for Hanscom Field, making it the first airport in the nation to receive an ISO 14001 Certification. The Certification establishes objectives and targets, monitoring procedures and roles and responsibilities to track and manage the environmental performance of Hanscom Field. This chapter should include a discussion of the following:

- Summary of existing sustainable practices currently being undertaken by Massport at Hanscom Field.
- Recycling policy and efforts.
- Toxic reduction at the airport.
- EMS Program at Hanscom Field, including the recent ISO 14001 Certification.
- Opportunities for sustainable development practices.

With this increasing focus on sustainable design, it is appropriate for Massport to include information on its own sustainable design program in the ESPR. The ESPR should include information on recycling and toxics reduction at the airport. The ESPR should also discuss the potential for incorporating other sustainable design elements into airport operations and/or the ongoing rehabilitation and expansion of existing airport facilities, including but not limited to the following:

- Optimization of natural day lighting, passive solar gain, and natural cooling;
- Use of energy efficient HVAC and lighting systems, appliances and other equipment, and use of solar preheating of makeup air;
- Favoring building supplies and materials that are non-toxic, made from recycled materials, and made with low embodied energy; and
- Provision of easily accessible and user-friendly recycling system infrastructure into building design; and development of an annual audit program for energy consumption, waste streams, and use of renewable resources.

Massport already incorporates some of these elements into its operation of the airport. The ESPR should summarize what steps Massport already takes, and how additional steps might increase environmental benefits.

XII. Mitigation

The ESPR should include a separate chapter on mitigation measures, which summarizes actions described in the previous chapters (such as TDM, noise abatement, and sustainability measures). This chapter should include identification of the parties responsible, and a schedule for implementation, and the estimated costs.

The ESPR should report whether Massport will institute night-time (11:00 pm to 7:00 am) landing fees for both GA and commercial flights that charge a penalty over daytime operations. It should report on Massport's effort to develop landing fees based on noise-generated by type of aircraft, with higher fees for noisier aircraft. The ESPR should identify Massport's effort to extend the "Fly Friendly" program to commercial flights. It should report on Massport's plans to provide additional noise attenuation around run-up areas.

XIII. MEPA Documentation

The ESPR should include a copy of this Certificate, copies of all comments received, and a glossary of terms. It should include all Supporting Technical Appendices or report how a reviewer could obtain a copy. The ESPR should identify when the proponent will submit any interim review documents, such as Annual Reports. The document should be made available in printed or CD-ROM format.

A cornerstone of MEPA review is making good information on environmental impacts readily available to the public. The internet offers an excellent medium through which information can be made accessible, and updated periodically. Therefore, I ask that Massport make available on its web site the key summary information in the 2005 ESPR.

Along with reliable information, ongoing public involvement will be key to a successful ESPR process. As part of its public information efforts, Massport has proposed to:

- Convene up to four technical workshops during the public review process for the Draft ESPR, which will be in addition to the MEPA hearing for the Draft ESPR.
- Convene one public meeting during the review of the Final ESPR, which will be in addition to the MEPA hearing for the Final ESPR.

At a minimum, Massport should circulate the 2005 ESPR to those parties who commented on this Certificate, and it should send a Notice of Availability of the ESPR to its standard MEPA mailing list. Copies should also be placed in the public libraries of each of the four towns. The ESPR should respond to comments received on this Certificate. I recommend a response to comments format similar to the format used for 2000 ESPR.

May 31, 2005
Date


Ellen Roy Herzfelder

Comments received:

Massport, 4/19/05
Julian J. Bussgang & Richard Canale, 5/12/05
ShhAir, 5/18/05
MassWildlife, 5/23/05
DEP/NERO, 5/23/05
MHC, 5/24/05
BED, 5/25/05

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